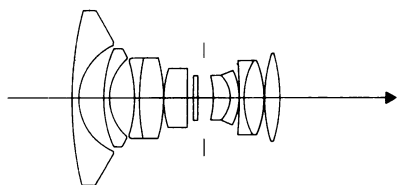


**MINOLTA AF FISH-EYE 16mm F2.8 (2578-100)**

**MINOLTA MAXXUM AF FISH-EYE 16mm F2.8 (2578-600)**

**LENS**



Construction : 11 elements in 8 groups  
(Including 1 filter)

Type : Retrofocus type

Coating : Minolta Achromatic

Angle of view : 180°

Lens mount : Minolta A mount

Lens signal contact : 5 contacts

Diaphragm : Automatic preset diaphragm

f No. : Maximum.....2.8  
Minimum.....22  
Full-stop setting.....6 stops

Diaphragm blade : 7 blades

**FOCUSING**

Focusing : AF, FA, M

Type : Double helicoid system

Minimum focusing distance : 0.2m

Distance scale :  $\frac{0.7 \quad 0.8 \quad 1 \quad 1.5 \quad 3}{0.2 \quad 0.25 \quad 0.3 \quad 0.5 \quad 1} \frac{\text{(ft)}}{\text{(m)}}$

Infrared correction scale : Yes

Depth-of-field scale : 4 8 11 16 22



**DIMENSIONS & WEIGHT**

Dimensions :  $\phi 75$  (max. diameter)  $\times$   
66.5mm (max. length)

Weight : 400 g

Lens hood : Built-in

Filter : Built-in (NORMAL, O56,  
FLW, B12)

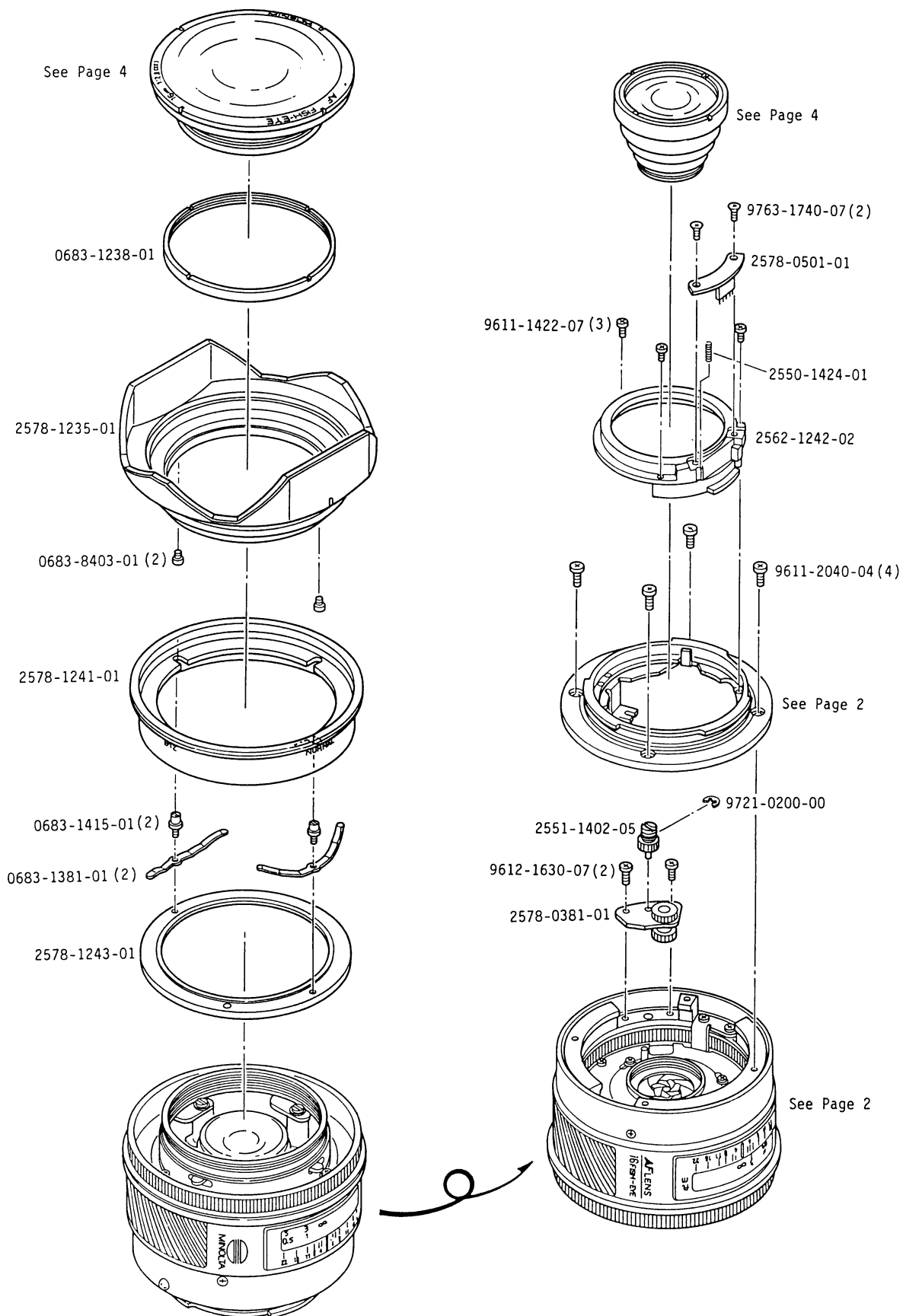
**ACCESSORIES**

Lens case : LH-1052

# I N D E X

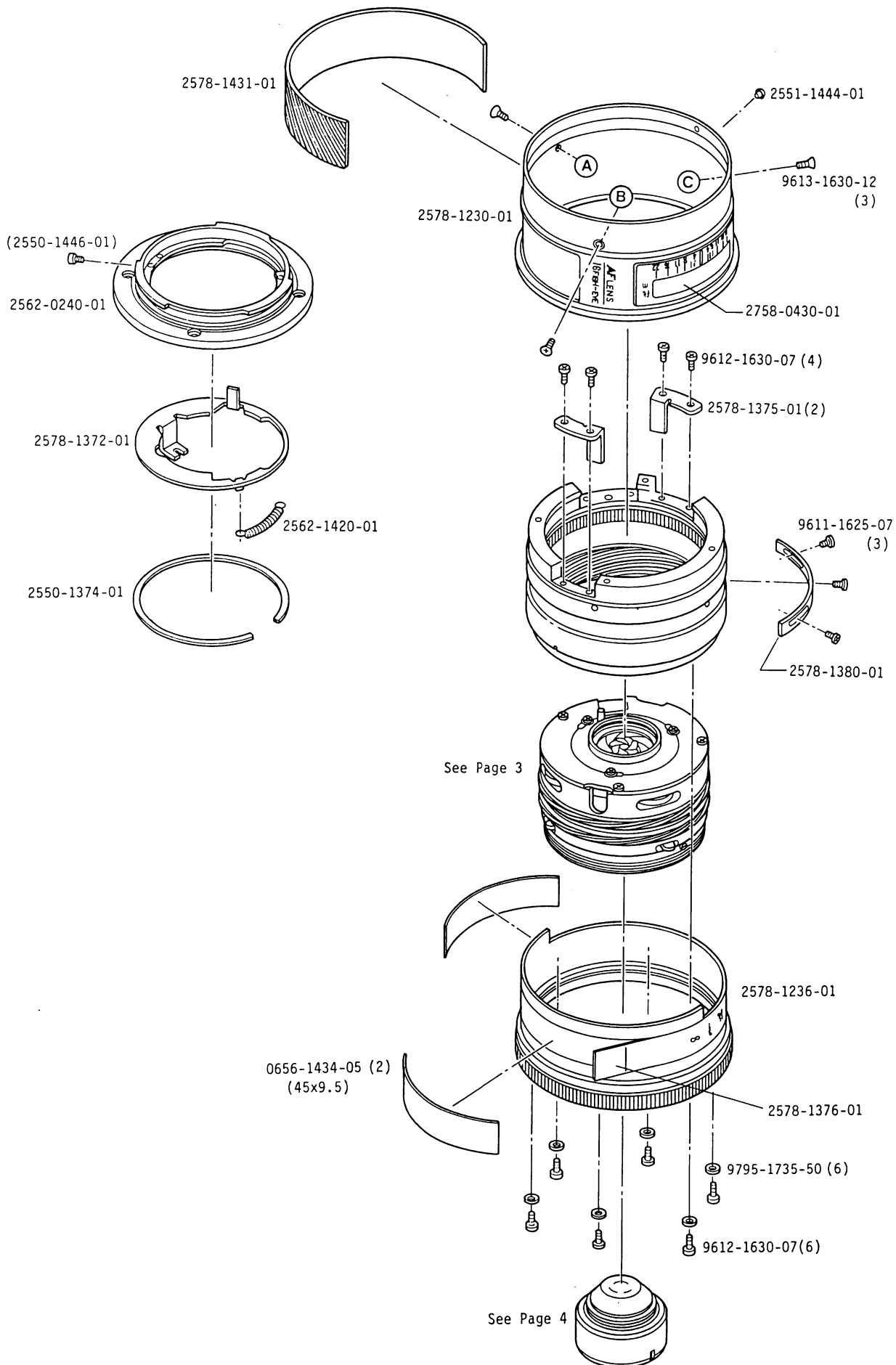
PART NO.	PAGE	PART NO.	PAGE	PART NO.	PAGE
2578-0031-----	4	0683-1238-----	1	9611-1422-07----	1
2578-0033-----	4	2578-1241-----	1	9611-1425-07----	3
2578-0036-----	3	2562-1242-----	1	9611-1625-07----	2
2578-0037-----	3	2578-1243-----	1	9611-2040-04----	1
2578-0038-----	3			9612-1630-07--1,2,3	
2578-0039-----	3	2578-1372-----	2	9612-1640-07----	3
2578-0113-----	3	2550-1374-----	2	9613-1630-12----	2
2578-0233-----	3	2578-1375-----	2		
2562-0240-----	2	2578-1376-----	2	9721-0200-00----	1
2557-0371-----	3	0683-1377-----	3	9763-1740-07----	1
0683-0373-----	3	2578-1380-----	2	9790-3160-40----	3
2578-0378-----	3	0683-1381-----	1	9790-4165-40----	3
2578-0381-----	1			9791-3160-40----	3
2578-0430-----	2	2551-1402-----	1	9791-4165-40----	3
2578-0501-----	1	0683-1405-----	3	9791-6076-40----	3
2578-0820-----	4	0683-1410-----	3	9793-1540-43----	3
2578-0830-----	4	0683-1412-----	3	9795-1735-50--2,3	
		0683-1415-----	1	9796-2050-40----	3
2578-1102-----	4	2562-1420-----	2	9799-3160-40----	3
2578-1103-----	4	0683-1421-----	3	9799-4165-40----	3
2578-1105-----	4	2550-1424-----	1		
2578-1106-----	4	2578-1431-----	2		
2578-1108-----	4	0656-1434-----	2		
2578-1109-----	4	2551-1444-----	2		
2578-1110-----	3	2550-1446-----	2		
2578-1112-----	3	2578-1602-----	4		
2578-1230-----	2	2578-1801-----	4		
2578-1234-----	3	2578-1805-----	4		
2578-1235-----	1	2578-1810-----	4		
2578-1236-----	2	0683-8403-----	1,3		

AF FISH-EYE 16mm F2.8 (22) Code No. 2578-100  
 MAXXUM AF FISH-EYE 16mm F2.8 (22) Code No. 2578-600



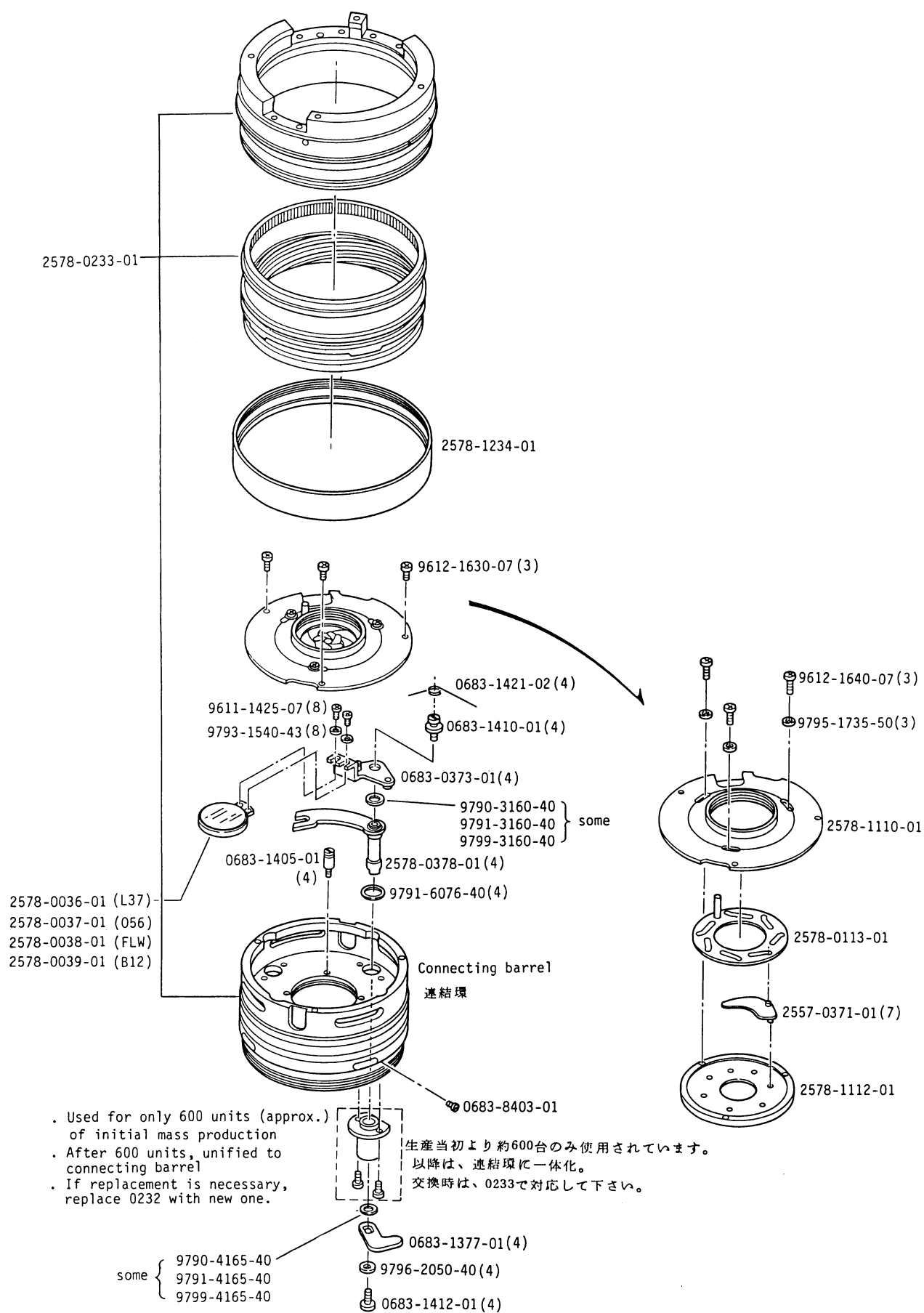
Part No.	Part Name		Qty.
2578-0381-01	Gear set	ギヤーセット	1
2578-0501-01	Lens contact board set	信号基板セット	1
2578-1235-01	Lens barrel	鏡頭環	1
0683-1238-01	Filter ring pressure	鏡頭環押え	1
2578-1241-01	Filter changing ring	フィルター変換リング	1
2562-1242-02	Rear light shield ring	遮光筒	1
2578-1243-01	Filter changing ring pressure	フィルター変換カム環	1
0683-1381-01	Pressure spring	フィルター変換リング押え	2
2551-1402-05	Coupler	カプラー	1
0683-1415-01	Operation pin	フィルター回転連動ピン	2
2550-1424-01	Spring	アーススプリング	1
0683-8403-01	Pin	位置決めピン	2
9611-1422-07	Phillips type screw	十字穴付なべ小ねじ	3
9611-2040-04	Phillips type screw	十字穴付なべ小ねじ	4
9612-1630-07	Phillips type screw	十字穴付なべ小ねじ	2
9763-1740-07	Tap tite screw	十字穴付タップタイトねじ	2
9721-0200-00	E ring	E リング	1

AF FISH-EYE 16mm F2.8 (22) Code No. 2578-100  
 MAXXUM AF FISH-EYE 16mm F2.8 (22) Code No. 2578-600



Part No.	Part Name		Qty.
2562-0240-01	Bayonet mount set	バヨネットマウントセット	1
(2550-1446-01)	Screw	ストッパービス	1
2578-0430-01	Distance scale window set	距離表示窓セット	1
2578-1230-01	Outer ring	固定保持環	1
2578-1236-01	Focusing ring	距離リング	1
2578-1372-01	Preset ring	プリセットリング	1
2550-1374-01	Preset ring pressure	プリセットリング押え	1
2578-1375-01	Helicoid key	直進キー	2
2578-1376-01	Distance scale plate	距離目盛板	1
2578-1380-01	Focusing ring stopper plate	距離ストッパー板	1
2562-1420-01	Main spring	メインSP	1
2578-1431-01	Leather	貼皮	1
0656-1434-05	Scotch tape (Per roll)	補強テープ	2
2551-1444-01	Bayonet point	バヨネット標点	1
9611-1625-07	Phillips type screw	十字穴付なべ小ねじ	3
9612-1630-07	Phillips type screw	十字穴付なべ小ねじ	10
9613-1630-12	Phillips type screw	十字穴付半丸皿小ねじ	3
9795-1735-50	Washer	薄ワッシャー	6

AF FISH-EYE 16mm F2.8 (22) Code No. 2578-100  
 MAXXUM AF FISH-EYE 16mm F2.8 (22) Code NO. 2578-600



Part No.	Part Name		Qty.
2578-0113-01	Diaphragm operation plate set	絞り操作板セット	1
2578-0233-01	Helicoid set	ヘリコイドセット	1
2557-0371-01	Diaphragm blade set	絞り羽根セット	7
0683-0373-01	Filter hold plate set	フィルター保持板セット	4
2578-0378-01	Filter fork set	フィルター作動フォークセット	4
2578-0036-01	Filter set (NORMAL)	フィルター (NORMAL)	1
2578-0037-01	Filter set (056)	フィルター (056)	1
2578-0038-01	Filter set (FLW)	フィルター (FLW)	1
2578-0039-01	Filter set (B12)	フィルター (B12)	1
2578-1110-01	Inner barrel	内筒	1
2578-1112-01	Diaphragm pressure ring	絞り押え環	1
2578-1234-01	Pressure ring	中へりコイド押え	1
0683-1377-01	Filter operation lever	フィルター作動レバー	4
0683-1405-01	Stopper	フィルター作動フォークストッパー	4
0683-1410-01	Pressure pin	フィルター保持板押えピン	4
0683-1412-01	Screw	フィルター作動レバー押えビス	4
0683-1421-02	Operation spring	フィルター作動SP	4
0683-8403-01	Pin	位置決めピン	1
9611-1425-07	Phillips type screw	十字穴付なべ小ねじ	8
9612-1630-07	Phillips type screw	十字穴付なべ小ねじ	3
9612-1640-07	Phillips type screw	十字穴付なべ小ねじ	3
9790-3160-40	Washer	薄ワッシャー	} Some
9790-4165-40	Washer	薄ワッシャー	
9791-3160-40	Washer	薄ワッシャー	
9791-4165-40	Washer	薄ワッシャー	
9791-6076-40	Washer	薄ワッシャー	
9793-1540-43	Washer	薄ワッシャー	4
9795-1735-50	Washer	薄ワッシャー	8
9796-2050-40	Washer	薄ワッシャー	3
9799-3160-40	Washer	薄ワッシャー	4
9799-4165-40	Washer	薄ワッシャー	} Some



■ When repairing following parts, must be checked resolving power by projection.

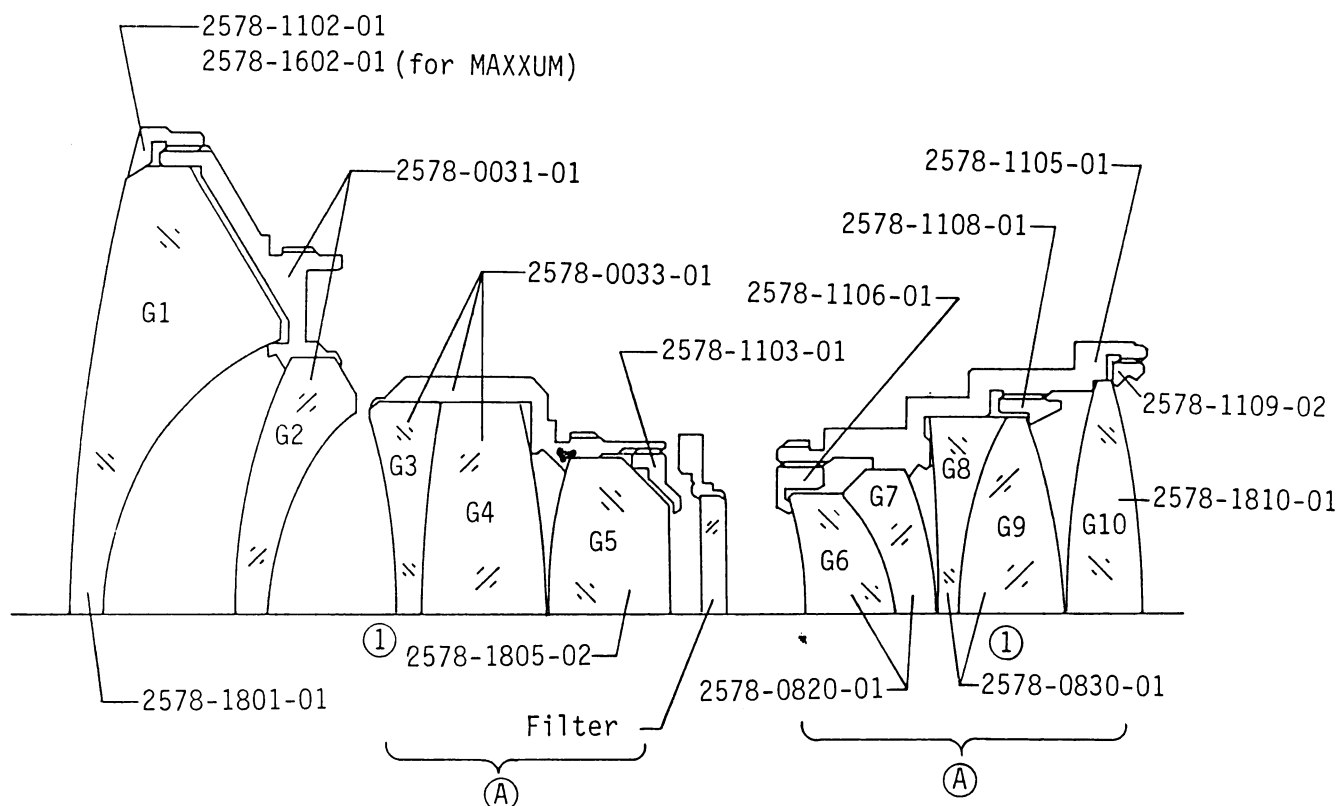
①: The influential lens element in the lens performance. (Number shows in order.)

Ⓐ: The influential lens group in the lens performance. (Influence: In alphabetical order)

■ 下記部品を修理した場合は、必ず投影解像力を確認して下さい。

①: レンズ性能によく影響するレンズ。(数字は順位を示す)

Ⓐ: レンズ性能によく影響するレンズ群。(影響度: アルファベット順)



Part No.	Part Name		Qty.
2578-0031-01	Front lens barrel set	前玉枠セット	1
2578-0033-01	Middle lens barrel set	中玉枠セット	1
2578-0820-01	Lens-G6,7 set	G 6, 7 セット	1
2578-0830-01	Lens-G8,9 set	G 8, 9 セット	1
2578-1102-01	G1 pressure ring	G 1 押え	1
2578-1103-01	G5 pressure ring	G 5 押え	1
2578-1105-01	Rear lens barrel	後玉枠	1
2578-1106-01	G6,7 pressure ring	G 6, 7 押え	1
2578-1108-01	G8,9 pressure ring	G 8, 9 押え	1
2578-1109-02	G10 pressure ring	G 1 0 押え	1
2578-1602-01	G1 pressure ring (For MAXXUM)	G 1 押え	1
2578-1801-01	Lens-G1	レンズ G 1	1
2578-1805-02	Lens-G5	レンズ G 5	1
2578-1810-01	Lens-G10	レンズ G 1 0	1

# REPAIR GUIDE

- The contents of this manual are in accordance with the assembling procedure. Therefore, follow the reverse procedure when disassembling.

## —Description of marks used—

- B : Adhesive
- S : Solvent
- A : Anti-diffusion agent
- G : Grease
- T : Tool
- : Point of assembling and general caution

## ■ Assembling and adjusting procedure

1 Helicoid set, Filter set .....	p. 1
2 Focusing ring, Middle lens group set .....	p. 2
■ Helicoid set installing .....	p. 2
3 Lens barrel, Filter changing ring, Filter changing ring pressure .....	p. 3
■ Filter positioning .....	p. 4
4 Inner barrel, Diaphragm blade set .....	p. 4
5 Gear set, Bayonet mount set, Rear light shield ring, Lens contact board set, Rear lens group set .....	p. 5
■ Aperture diameter adjusting and aperture diameter pre-checking .....	p. 5
6 Outer ring, front lens group set .....	p. 6
■ Flange back (f'F) adjusting .....	p. 6
■ Aperture diameter checking .....	p. 6
■ General function checking .....	p. 6
■ Description of focusing .....	p. 7
■ Schematic circuit diagram and printed wiring diagram .....	p. 7

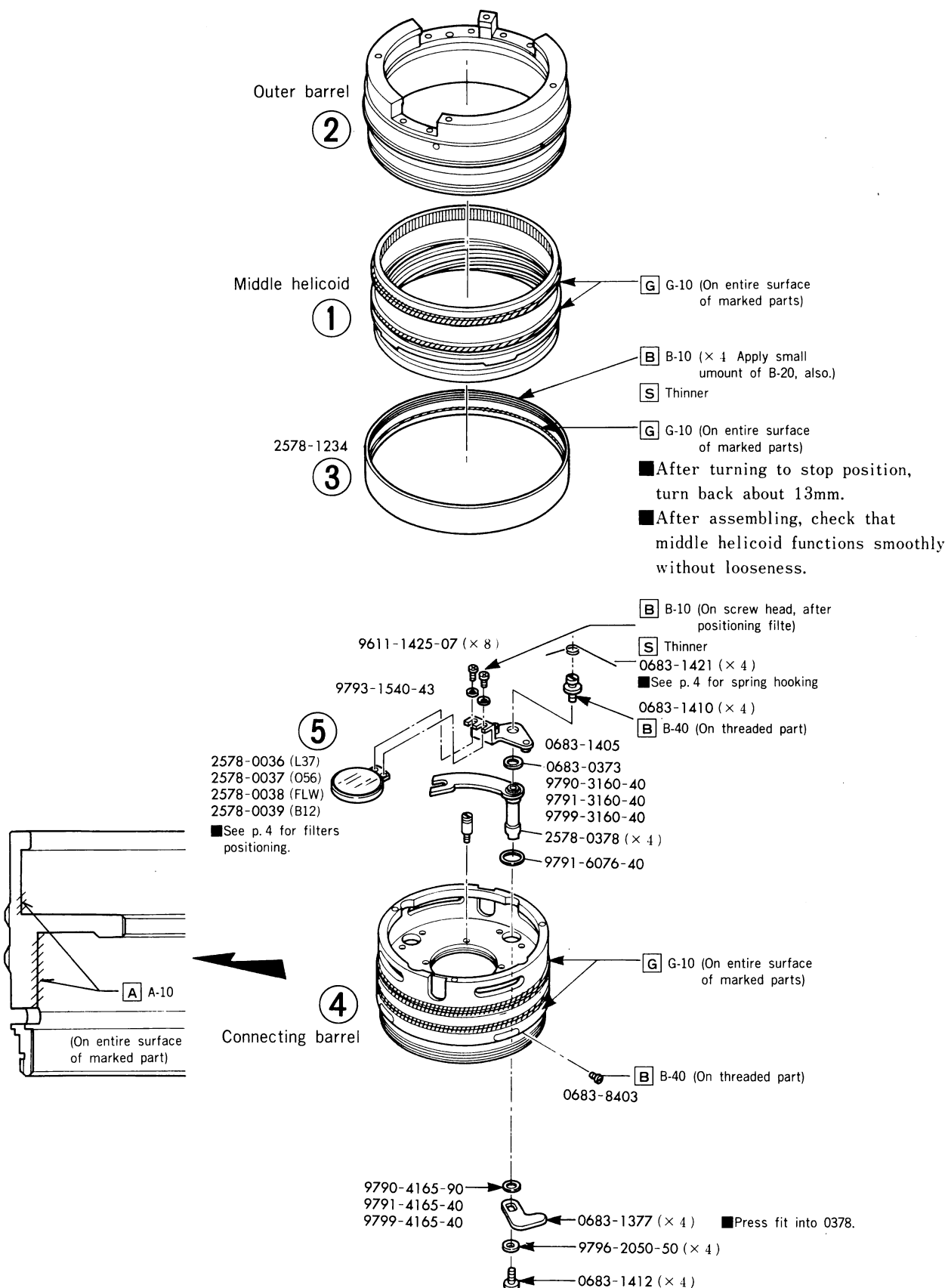
## ■ Precautions

- Since this lens uses many resin parts, keep the following in mind when assembling and adjusting.
    - Use Fronsolve or alcohol when cleaning.
    - Never use thinner, ketone or ether.
  - Since this lens uses MOS-IC, it is necessary to take special precautions about static electricity.
- When performing repair, use the conductive mat as shown.



# 1 Helicoid set, Filter set

■ Assemble the parts in order of ①-⑤.



## 2 Focusing ring, Middle lens group set

■ Assemble the parts in order of ① - ⑥.

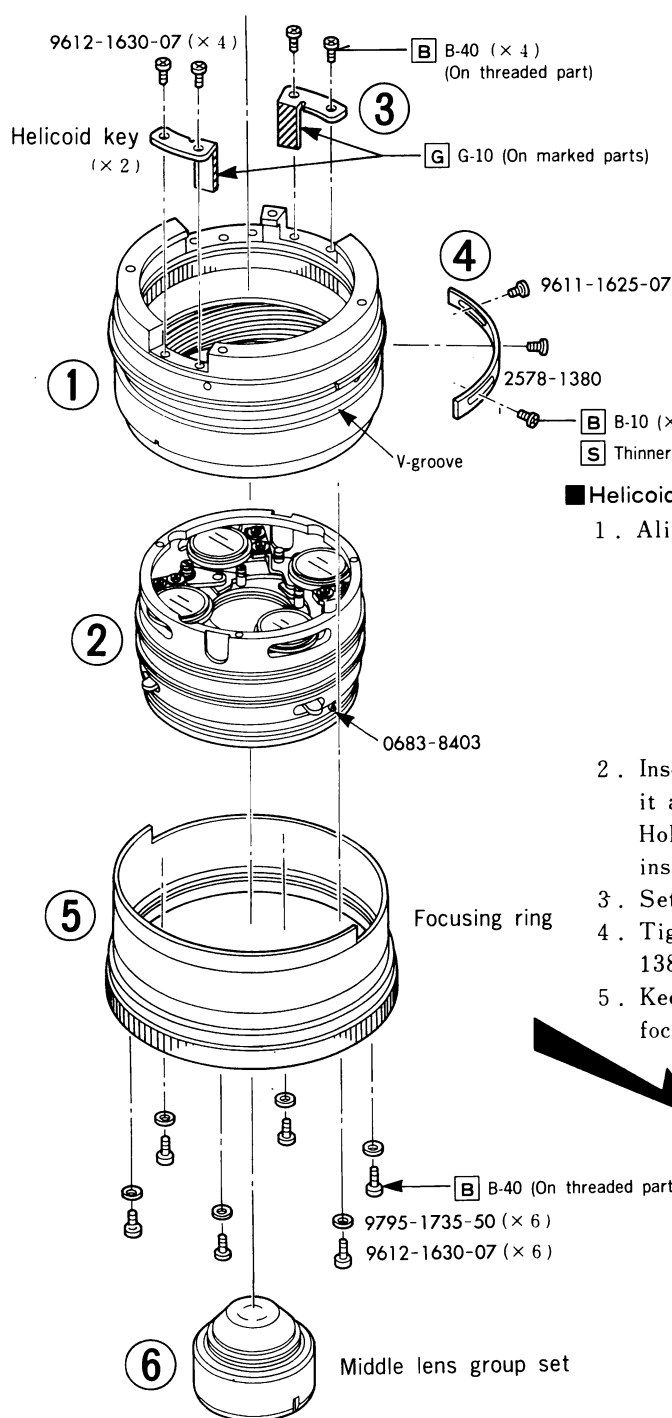
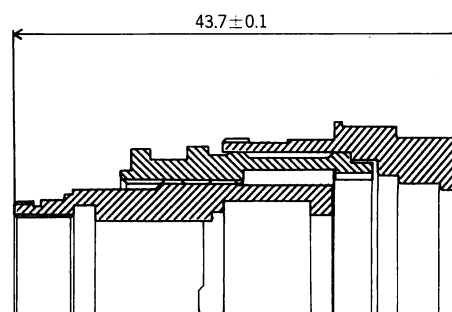


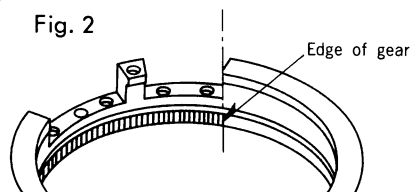
Fig. 1



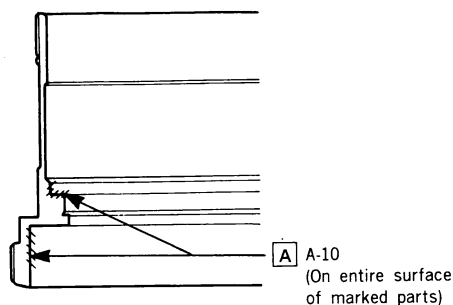
### ■ Helicoid set installing procedure

1. Align outer barrel and middle helicoid as fig. 2.

Fig. 2

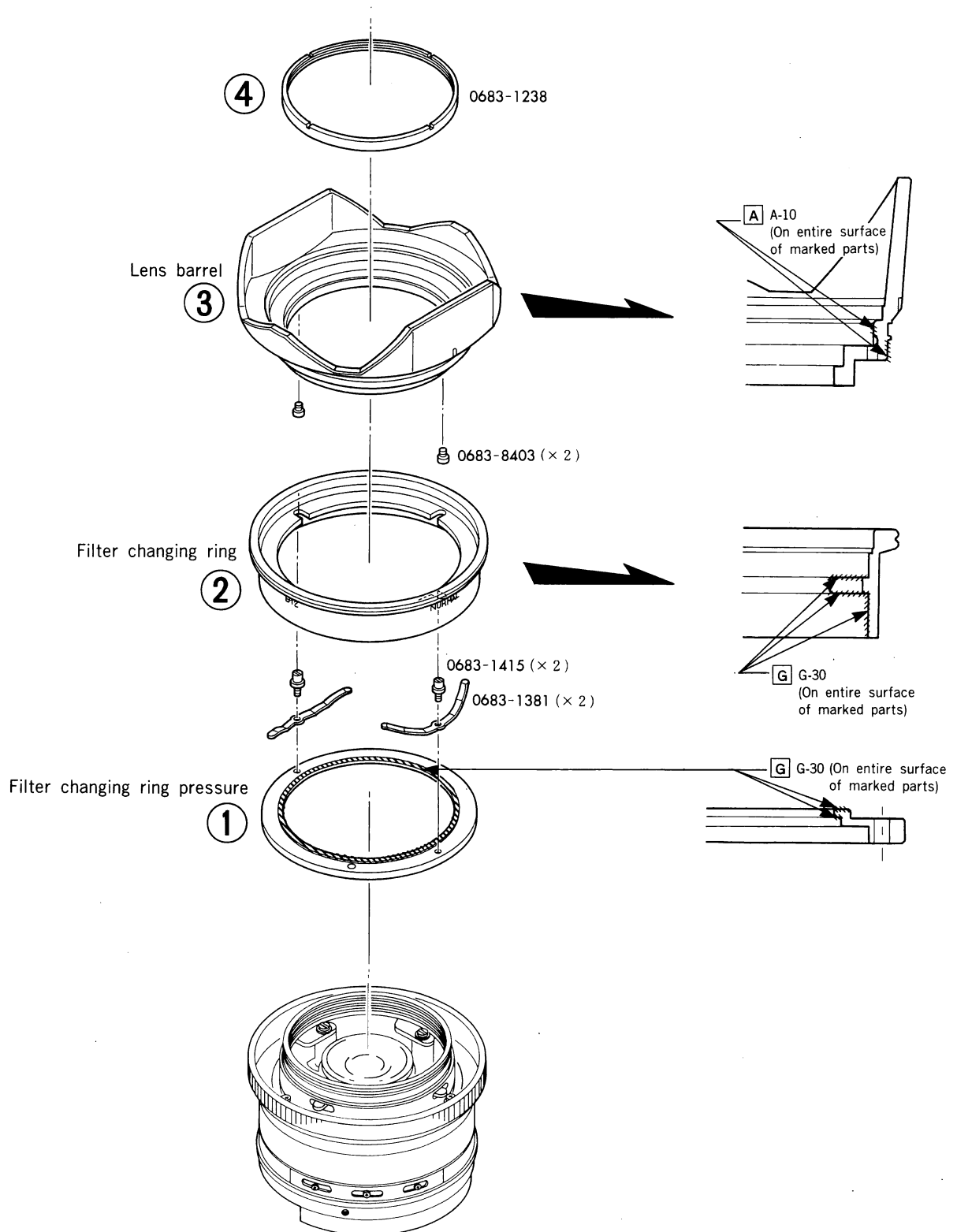


2. Insert connecting barrel, aligning screw (0683-8403) on it and V-groove of outer barrel. Hold filter operation lever (0683-1377,  $\times 4$ ) toward the inside to complete insertion.
3. Set helicoid keys and check helicoid for smoothness.
4. Tighten screws ( $\times 2$ ) at the center of oval holes of 2578-1380 temporarily.
5. Keeping the height of helicoid to  $43.7 \pm 0.1$  mm as fig. 1, set focusing ring with touched to 2578-1380 (at infinity position).



**3 Lens barrel, Filter changing ring, Filter changing ring pressure**

■ Assemble the parts in order of ①-④.



## Filter positioning

### Filter removing

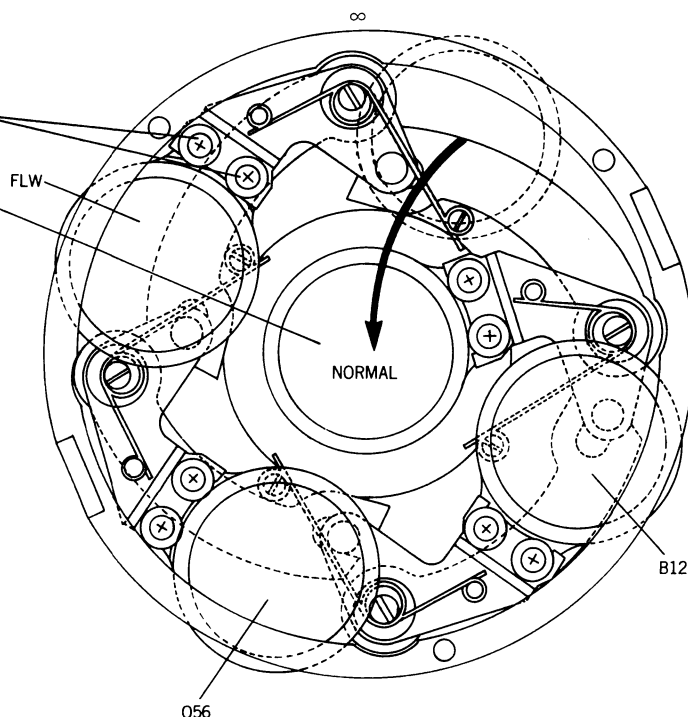
- Loosen 2 screws to remove filter.

### Filter positioning

- Adjust filters' position by loosening 2 screws so that filter frame does not cover the lens of middle lens of middle lens group.

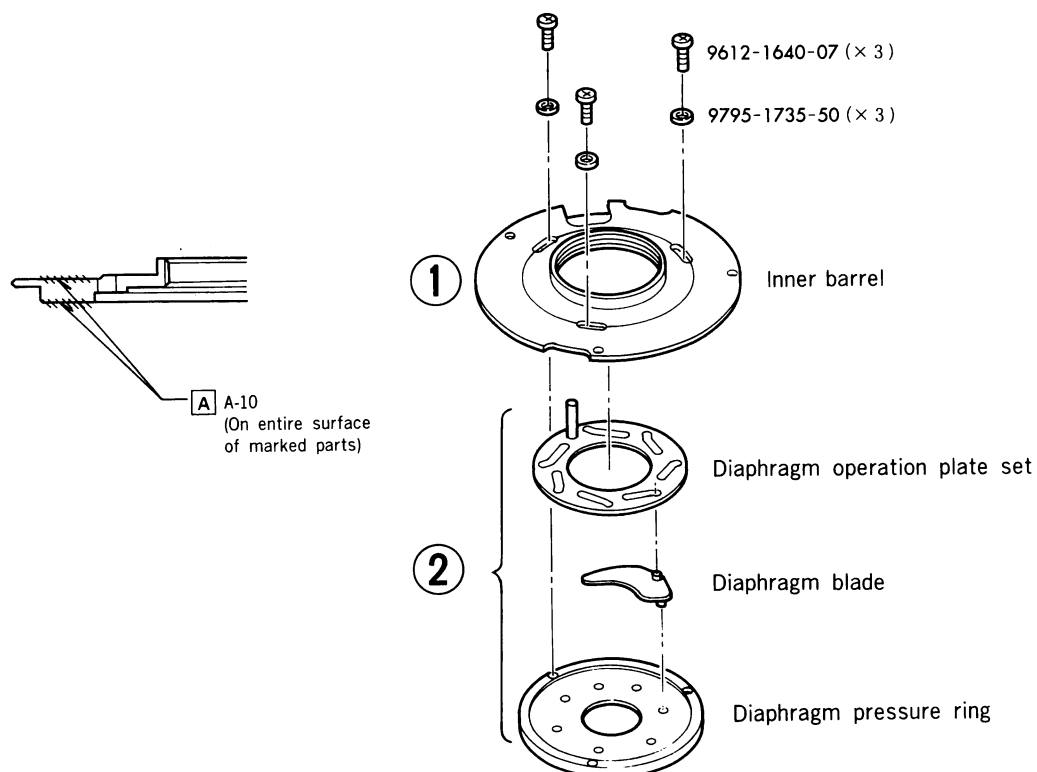
### Filter functioning

- Check that filter moves smoothly by spring.
- Insert proper number of washers to decrease vertical looseness of filter fork set (2578-0378).
- Check the evenness of each filter fork set, if necessary.



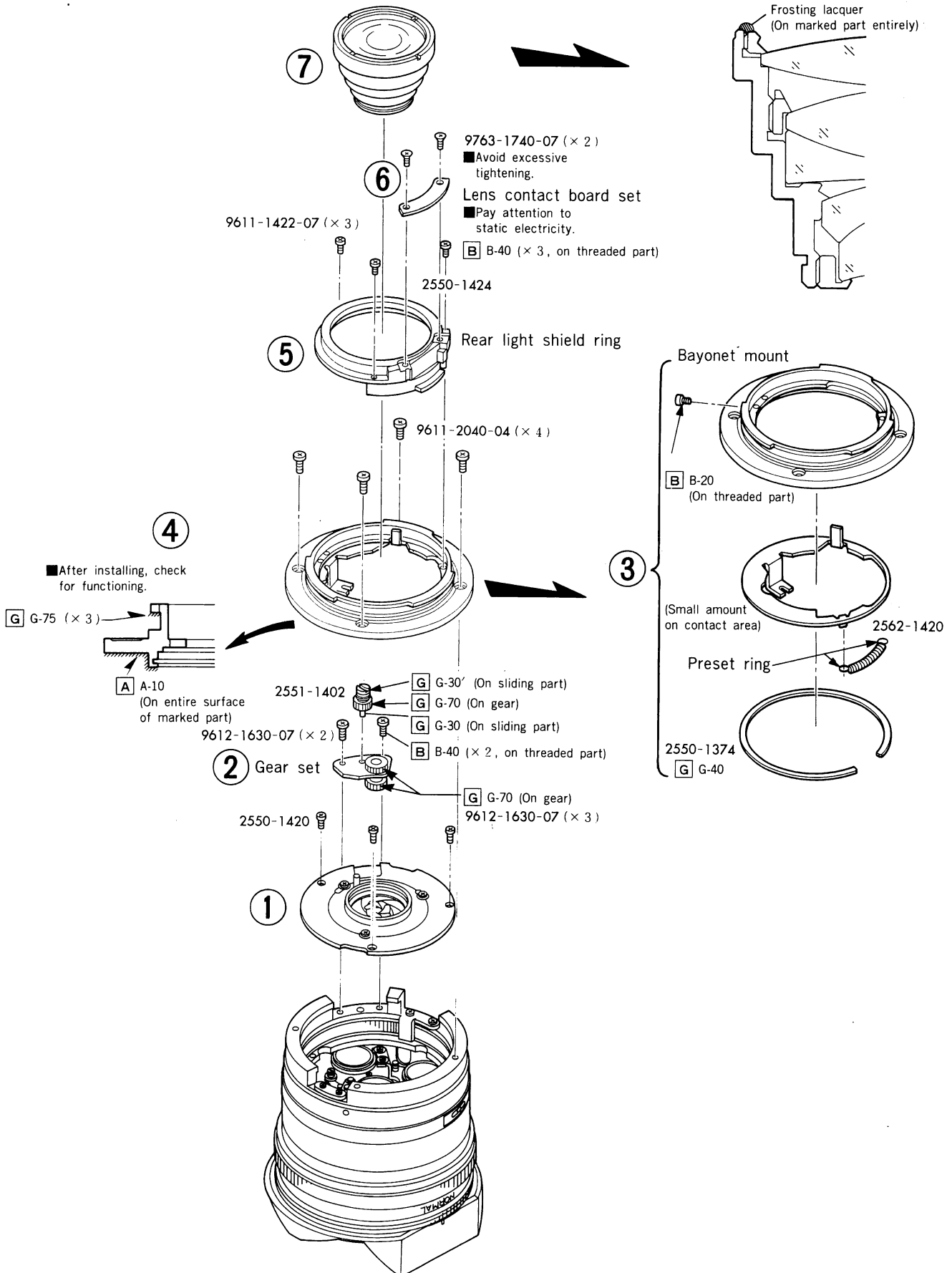
## 4 Inner barrel, Diaphragm blade set

- Assemble the parts in order of ①-②.



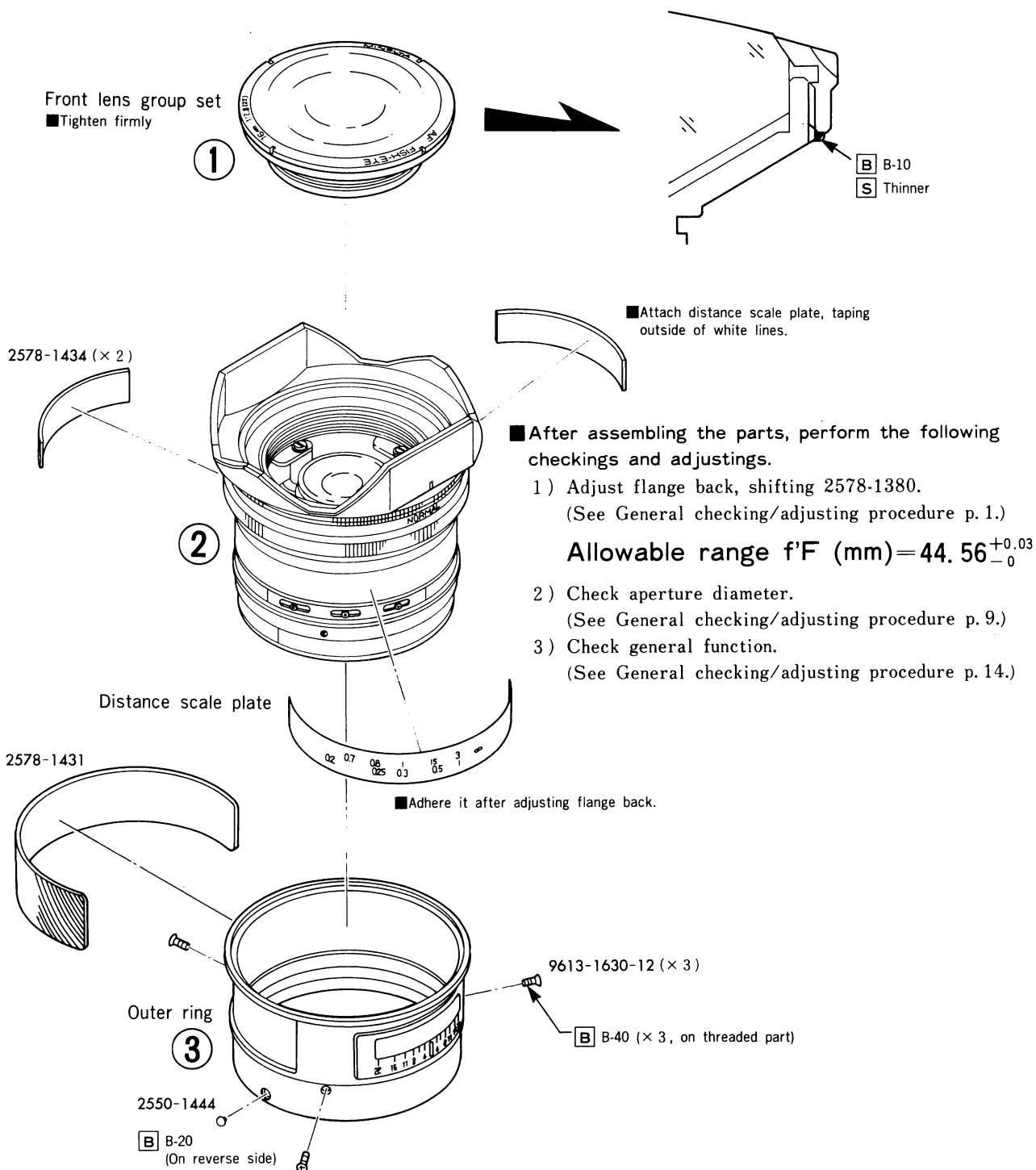
## 5 Gear set, Bayonet mount set, Rear light shield ring, Lens contact board set, Rear lens group set

■ Assemble the parts in order of ①-⑦. After assembling, perform "Aperture diameter adjusting" and "Aperture diameter pre-checking", following General checking/adjusting procedure pp.8-11.



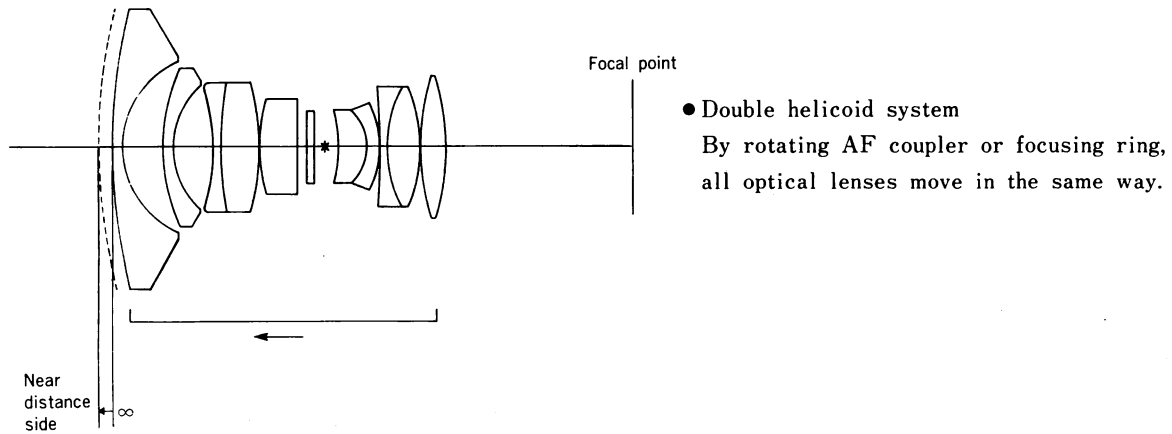
## 6 Outer ring, Front lens group set

■ Assemble the parts in order of ①-③.





## Description of focusing



## Schematic circuit diagram, Printed wiring diagram

